Press Release
For Immediate release 11/4/11

Stemnion uses ECIS cell impedance technology from Applied Biophysics to measure placental stem cells

Stemnion, Inc., Pittsburgh, PA, is a regenerative medicine company focused on the research, development, and clinical use of therapeutic products obtained from amnion-derived, non-embryonic stem cells also known as placental stem cells. The technology provides a new approach to wound healing and tissue repair. Stemnion's products are being developed to promote better healing in a wide range of conditions and injuries. The first product, Amnion-derived Cellular Cytokine Solution (ACCS,) has been used in a Phase I safety clinical trial in the United States for the treatment of burns.

Applied BioPhysics, Inc.,Troy, NY, applies the results of biophysical research to provide practical tools for cell research and drug discovery. ECIS or Electric Cell-substrate Impedance Sensing is an impedance-based method to study many of the activities of animal cells when grown in tissue culture in real-time. These include morphological changes, cell locomotion, and other behaviors directed by the cell's cytoskeleton. The ECIS approach has been applied to numerous investigations including measurements of the invasive nature of cancer cells, the barrier function of endothelial cells, in vitro toxicity testing as an alternative to animal testing, and signal transduction involving GPCR's for modern drug discovery.

ECIS measures the change in impedance of small electrodes to AC current flow as cells grow on the electrodes. Applied BioPhysics applies a mathematical model of the impedance changes due to the presence of a cell layer, where the impedance data can be used to calculate cell morphological parameters including the barrier function of the cell layer, the spacing between the ventral side of the cell and the substratum and the cell membrane-capacitance, measurements which are not possible with a microscope.

ECIS can also be used to replace the traditional "scratch" or "scrape" assay. Instead of disrupting the cell layer mechanically with a toothpick, needle or pipette tip and following the migration of cells to "heal" the wound with a microscope, electric fields are employed to both wound and monitor the healing process.

For further information contact:

Nancy Vlahos
Applied BioPhysics
185 Jordan Road
Troy, NY 12180
Ph: 866-301-ECIS (3247)
Fax 518-880-6860
vlahos@biophysics.com

George Sing
Stemnion Inc
100 Technology Drive
Pittsburgh, PA 15219
Ph: 412-402-9923
Fax 412-452-9480
sing@stemnion.com